

OLYMPIC COAST NATIONAL MARINE SANCTUARY

A REPORT FOR SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: SEPT 20, 2013 – NOV 14, 2013

ABOUT THE SANCTUARY

Olympic Coast National Marine Sanctuary spans 3,189 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons.

The sanctuary protects a productive upwelling zone - home to rich marine mammal and seabird faunas, diverse populations of kelp and intertidal algae, and thriving invertebrate communities. The sanctuary is also rich in cultural resources, with over 150 documented historical shipwrecks and the vibrant contemporary cultures of Makah, Quileute, and Hoh Indian Tribes, and Quinault Nation.

OFFICE REPORT

OLYMPIC COAST NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES

Organized by Olympic Coast National Marine Sanctuary (OCNMS or sanctuary) management plan priority areas

TREATY TRUST RESPONSIBILITIES

ONMS and Makah Tribe Meet

ONMS Director Dan Basta, Deputy Director John Armor and OCNMS staff met with Makah Tribal Chair Timothy J. Greene, Council Member Greig Arnold, the Makah General Manager, Directors of Makah Fisheries, Office of Marine Affairs and the Tribal Historic Preservation Office to discuss areas of common interest, ways to improve communication and collaboration. Follow up meetings between OCNMS and Makah staff are being planned.

ACHIEVE EFFECTIVE AND COORDINATED MANAGEMENT

OCNMS Reports on FY 2013 Management Plan Implementation

Olympic Coast National Marine Sanctuary (OCNMS) has completed a draft of the second annual report on the implementation of OCNMS's 2011 management plan, including reporting on established performance measures. The draft 2013 Management Plan Implementation Report and a Draft 2014 Management Plan Implementation Priorities document will be presented to the OCNMS Advisory Council at their November meeting. These two documents are meant as a package that would allow the AC and IPC to participate in OCNMS planning in a meaningful manner. When finalized, the 2013 Implementation report will be posted at

<http://olympiccoast.noaa.gov/management/management101.html#effectiveness>

OCNMS Advisory Council New Member Recruitment

Olympic Coast National Marine Sanctuary (OCNMS) Advisory Council is accepting applications for seats beginning on Nov. 15 for the positions of Research (primary and alternate positions), Citizen at Large (primary and alternate positions), and Marine Resource Committee (primary only). Candidates will be selected based on their expertise and experience in relation to the seat for which they are applying, community and professional affiliations, and views regarding the protection and management of marine resources. Applicants who are chosen should expect to serve a 3-year term. For more information, please contact Karlyn Langjahr, Sanctuary Advisory Council Coordinator, at Karlyn.Langjahr@noaa.gov or (360) 457-6622 x 31. For more information about the Advisory Council, and/or to download the application kit, visit

http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html

CONDUCT COLLABORATIVE RESEARCH, ASSESSMENTS AND MONITORING TO INFORM ECOSYSTEM-BASED MANAGEMENT

Fishing Vessel Sinks in Olympic Coast National Marine Sanctuary

NOAA received a notification on September 27th that the 50 foot *F/V Fjord Mist* sank in 103 feet of water, roughly 2 miles West of La Push, WA, within Olympic Coast National Marine Sanctuary. The vessel had an estimated 150 gallons of diesel on board. All persons aboard the vessel were rescued. The USCG reports a light sheen with no wildlife observed in the immediate area of the spill.

Oceanographic Monitoring Program Completes 2013 Season at Olympic Coast

In collaboration with the University of Washington, Olympic Coast National Marine Sanctuary maintains ten oceanographic moorings throughout the sanctuary. They maintain a historical data set of observations of changes in the ecosystem related to upwellings, acidification, current changes, and shifts in seasonal variations. These data sets are a vital part of the OCNMS management plan and are compared to predictive models attempting to understand the changing climate and health of the marine ecosystem processes affecting the sanctuary. Following the lapse in federal appropriations and prior to the onset of winter weather, OCNMS requested and received emergency permission from NOAA to recover the oceanographic moorings. The mooring packages are not designed to withstand severe weather and could have been lost or destroyed if not recovered. The operation resulted in the recovery of equipment valued at \$170,000.

IMPROVE OCEAN LITERACY

OCNMS Education Program Reaches 120 Students from Spokane

Olympic Coast National Marine Sanctuary, in partnership with Feiro Marine Life Center and NatureBridge, hosted 120 sixth grade students from Spokane. Sanctuary staff exposed all students to OCNMS for their first time and engaged students in the topic of marine debris and ocean currents as they dissected albatross boluses. Feiro Marine Life Center staff conducted a beach seine with the students to observe local marine life, including plankton. Students also visited the Olympic Coast Discovery Center as Feiro staff conducted a spiny dogfish dissection. The overall program highlighted two of the seven Ocean Literacy principles.

North Olympic Watershed Ocean Science Program Reaches 250 Students

The North Olympic Watershed Program, a joint partnership between Feiro Marine Life Center and Olympic Coast National Marine Sanctuary, served 250 fourth grade students from area school districts of Sequim, Joyce and Port Angeles. Fourth grade students observe, touch and learn about live, local, marine life as well as collect and observe plankton with staff from Feiro Marine Life Center. The fourth grade students also learn about marine mammals in OCNMS waters and their roles in the food chain from sanctuary staff. Three of the Ocean Literacy principles are addressed in this program and students brainstorm ways we can decrease marine debris in our environment. This program helps to build upon the NOW Ocean Science program for fifth grade students.

New NOAA View Education Tool Released

NOAA has just released a beta version of an online education tool that gives educators and the public interactive access to NOAA environmental data, enabling unique views of the world's oceans, land, atmosphere, cryosphere and climate. NOAA View brings together 60 different sets of data going as far back as 1880 with new data sets being added regularly. The content is updated on a daily, weekly, monthly or annually basis as data observations and collections permit. This easy-to-use viewer includes satellite information that users can browse, animate and download from the NOAA Visualization Lab, putting NOAA data in the hands of students in classrooms around the world. Examples of data include wind speed, coral bleaching, ice cover, vegetation, precipitation, and dissolved oxygen. You can explore NOAA View at www.nnvl.noaa.gov/view.

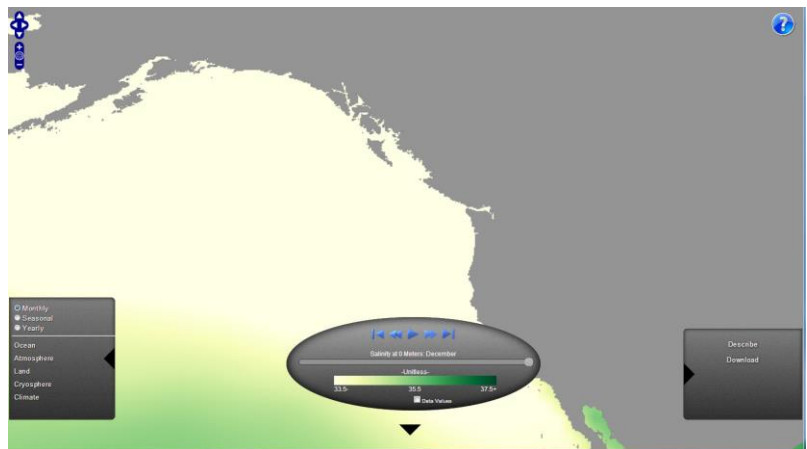


Figure 1: Surface salinity in Washington, Western Canada, and SE Alaska.

Climate Change Site Scenario Featured Subject at Peninsula College Lecture Series

Education and Outreach Coordinator Robert Steelquist delivered a presentation on "Climate Change and the Olympic Coast" at Peninsula College's Studium Generale lecture series. The presentation highlighted the findings of "Climate Change and the Olympic Coast National Marine Sanctuary: Interpreting Potential Futures," a collaborative effort between the sanctuary and Washington Sea Grant. The audience of about 150 was composed of students, faculty and staff of Peninsula College and many community members. The publication was published in March, 2013 as part of the Marine Sanctuary Conservation Series (ONMS-13-01).

Peninsula College Marine Biology Students Visit Olympic Coast Discovery Center

Fifteen Peninsula College students learned about the National Marine Sanctuary Program during a visit to the Olympic Coast Discovery Center. Peninsula College marine biology instructor, Barbara Blackie, described how to identify marine mammals that frequent OCNMS using marine mammal skulls on display.

Revamped OCNMS Website Visits Increase by 29 Percent in FY13

Web statistics for Olympic Coast National Marine Sanctuary website olympiccoast.noaa.gov, which was overhauled in 2012 and 2013, showed an increase from 140,175 visits in FY12 to 181,011 in FY13, according to reports from the National Ocean Service. This represents a 29 percent increase in web browsing. The overhaul was one of the action items from the 2011 OCNMS Management Plan to establish a web structure to better match programmatic elements of the management plan as well as to adopt the official template of the Office of National Marine Sanctuaries. The website's companion Facebook page has also gathered additional attention, nearly doubling "friends" in the past year.

CONSERVE NATURAL RESOURCES IN THE SANCTUARY

OCNMS Supports Washington CoastSavers First International Coastal Cleanup

Washington CoastSavers has taken the lead for the first time in coordinating the state's participation in the International Coastal Cleanup. More than one hundred volunteers cleaned Washington's outer coast beaches from Cape Disappointment to Cape Flattery, including beaches adjacent to Olympic Coast National Marine Sanctuary (OCNMS). OCNMS staff led volunteer registration on the Makah Reservation.

OCNMS Continues Efforts to Address Marine Debris

Olympic Coast National Marine Sanctuary (OCNMS) staff joined with Makah tribal representatives to provide an orientation and escort for a newly formed Washington Conservation Corps crew comprised of military veterans on their first week of work. With funding from Washington State, this crew has as its primary mission removal of shoreline debris from remote areas of Washington's outer coast, much of which is shoreline of the sanctuary. In October the crew removed all sizeable debris from a 2.3 mile stretch of Shi Shi Beach, and hauled about 300 pounds and over 1,000 pieces of foamed plastic over a 2-mile trail to the nearest road. Sanctuary staff also consulted on and provided support letters for three proposal submissions to NOAA Marine Debris Programs Community-based Grants Program. One proposal was a partnership between The Nature Conservancy and the Quinault Indian Nation focused on location and removal of derelict Dungeness crab gear. Two proposals addressed shoreline debris. One supported expansion of the Makah Tribe's capacity to remove marine debris from tribal lands and conduct community outreach. The other supported a partnership between the Student Conservation Association and Olympic National Park to expand capacity for cleanups and outreach on marine debris on parks shores.

Essential Fish Habitat (EFH) Review Phase 2 Report and Proposals to Modify EFH

The Pacific Fishery Management Council (Council) agreed that there was sufficient new information to move into Phase 3 of the EFH review process. The Council directed Council staff to work with the EFH Review Committee to complete the draft Phase 2 report in a streamlined manner, for inclusion in the March 2014 Briefing Book. Towards the goal of adopting a process and schedule for the Phase 3 effort, the Council requested the Southwest Fisheries Science Center and Northwest Fisheries Science Center review the discussion and materials from this Council meeting and provide evaluation criteria and methods that can be used to answer the general question "is the current EFH designation working?" These evaluation methods are scheduled for inclusion in the advance Briefing Book for the March Council meeting, to facilitate discussion of (1) conducting the evaluation of existing EFH areas, and (2) a schedule to formally scope issues for a fishery management plan amendment.

COASST Delivers HAZWOPER Training to Volunteers

University of Washington's COASST team delivered an eight hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training to 25 COASST volunteers and Washington Conservation Corps volunteers at Peninsula College on Nov. 2. OCNMS staff Heidi Pedersen participated in facilitating the training. With HAZWOPER training, COASST volunteers will be able to assist on the beach under supervision. Volunteers will be able to assess a beach for oil after a spill, conduct US Fish and Wildlife beached bird surveys to quantify spill damage, and to keep safe while working around oil.

OCNMS and WA Department of Fish and Wildlife Meet with Makah Tribe on Essential Fish Habitat

Key staff from Olympic Coast National Marine Sanctuary (OCNMS) and Washington Department of Fish and Wildlife (WDFW) met with representatives of Makah Fisheries, Makah Tribal Council and Northwest Indian Fisheries Commission on October 24. The goal was to discuss aspects of the Pacific Fishery Management Council's Groundfish Essential Fish Habitat (EFH) proposals that occur in the Makah's treaty-secured Usual and Accustomed fishing areas. Of particular interest

to the tribe was the joint OCNMS/WDFW proposal to modify and possibly expand the Olympic 2 Conservation Area in which non-treaty bottom trawling is currently prohibited. This proposal would add additional measures to protect sensitive deep-sea coral and sponge habitats that recently have been documented in areas adjacent to Olympic 2.

CONGRESSIONAL ACTIVITIES

Governor Inslee's Staff Briefed on Port Angeles Marine Campus and Waterfront Redevelopment

David Westbrook, Office of the Governor for Washington State, went on a walking tour of improvements to the downtown Port Angeles area, accompanied by representatives from the City of Port Angeles, Feiro Marine Life Center, and Olympic Coast National Marine Sanctuary. The City of Port Angeles recently completed Phase 1 of the Waterfront Transportation Plan which has greatly improved the appearance of the waterfront area and is now moving into Phase II which will include development of the west end park and the potential location of a proposed marine campus. Mr. Westbrook will be briefing Governor Inslee for an upcoming trip to Port Angeles which may include a briefing on the marine campus.

UNDERSTANDING THE SANCTUARY'S CULTURAL, HISTORICAL AND SOCIOECONOMIC SIGNIFICANCE

OCNMS Participates in Tribal Cultural Landscape Project Workshop Hosted by Makah Tribe

Robert Steelquist, representing the Maritime Heritage Program and Olympic Coast National Marine Sanctuary, George Galasso and Nancy Wright of OCNMS and Valerie Grussing of the Marine Protected Areas Program participated in the second tribe-sponsored workshop of the "Tribal Cultural Landscapes Project" funded by the Bureau of Ocean Energy Management (BOEM) as a collaboration among BOEM, NOAA, the Confederated Tribes of Grand Ronde, the Yurok Tribe and the Makah Tribe. The two-day workshop included participation of Washington coastal tribes, and numerous State and Federal agencies. The workshop resulted in a refined working definition of a "tribal cultural landscape," and considerable discussion of the use of the concept in the contexts of Tribal Treaties, the National Historic Preservation Act, the National Environmental Policy Act, marine spatial planning and other regulatory and management planning contexts.

SANCTUARY PERMITTING

Issued Permits and Approvals - none

Pending Permit Requests

OCNMS-2013-007 – Dr. Florian Graner, Sealife Productions

Project Title: Cineflex Aerial Filming of Olympic Coast

Permitted Activity: low altitude overflight within the overflight restriction zone of Olympic Coast National Marine Sanctuary; minimum altitude to be determined

Project Location: over waters of the Olympic Coast National Marine Sanctuary with approach to shore near Cape Flattery, Point of the Arches, Hoh River and Queets Rivers

Permit Duration: when issued (in November 2013) through February 15, 2014

OCNMS-2013-008 – Dr. Shawn Larson, Seattle Aquarium

Project Title: Fall-Winter 2013-2014 Aerial Survey of Washington Sea Otters, *Enhydra lutris*

Permitted Activity: one day of low altitude overflight within the overflight restriction zone of Olympic Coast National Marine Sanctuary

Project Location: over entire nearshore area of the sanctuary

Permit Duration: through March 1, 2014

LEARN ABOUT YOUR SANCTUARY / NATURAL HISTORY

New information about resources in the sanctuary is always emerging. This section of the office report is reserved for sharing brief descriptions of recent studies, observations, findings, reports, and forecasts related to the sanctuary.

Dead Sea Otter Found

A dead sea otter was found at Hobuck Beach and reported to Jon Scordino and Adrienne Akmajain, marine mammal biologists for the Makah Tribe, who responded and collected data on the sea otter. Jon also noted having observed common murre nesting on islands where he has not previously noted nesting.

North Pacific Right Whale Sighting



Figure 3: Right whale (*Eubalaena japonica*)

designated, OCNMS Research Coordinator, Ed Bowlby was on a survey crew that provided the first photographic documentation of a North Pacific right whale off Washington state.

Right whale nursery areas are in shallow, coastal waters with high copepod and krill densities, however very little is known about their distribution as adults except that it appears to follow the abundance of their prey, according to NOAA Fisheries Office of Protected Resources. During winter, calving takes place in lower latitudes and coastal waters. The calving population is small and the whereabouts of much of the Eastern Pacific population is unknown. They migrate to higher latitudes in the spring and summer.

A rare sighting of a North Pacific right whale (*Eubalaena japonica*) off British Columbia, at Swiftshore Bank north of OCNMS and the international boundary was reported by Dr. John Ford (DFO, Canada). The whale was first sighted by Brian Gisborne on Friday, October 25, on Swifsure Bank off the entrance to the Strait of Juan de Fuca. According to John Ford: "It looks like a big old whale with a nasty looking but healed injury on its rostrum, likely from a past entanglement. This is a different individual than the one found off Haida Gwaii last June, and is new to the North Pacific right whale ID catalogue (less than 30 whales in that catalogue)." This October sighting was the second North Pacific right whale sighting off British Columbia in 62 years. This population summers in the southeastern Bering Sea and Gulf of Alaska, may have no more than 50 animals. It is considered critically endangered. Before sanctuary

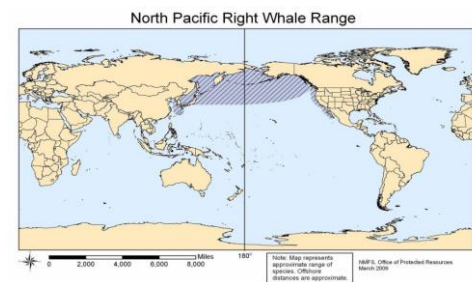


Figure 2: Estimated range of right whales

COASST Seasonal Surveys Reveal Common Murre Wreck and Unusual Seabirds



Figure 4: "Wisdom" the 62 year old Laysan Albatross

early October. High tides during the latter part of the October prevented COASST surveys at many coastal beaches. COASST predicts that the mortality rate of Common Murres will soon return to normal, and that this wreck reflects a short event due to the September storm.

Two unusual seabird species were found by COASST surveyors after the September storms. A strongly pelagic Mottled Petrel (*Pterodroma inexpectata*) that breeds in New Zealand and migrates to the North Pacific where it concentrates around the Gulf of Alaska and Aleutian Islands. This species is a rare find on Washington beaches.

A normal increase in seabird mortality occurs at this time of year, and it is reflected in the data from COASST (Coastal Observation and Seabird Survey Team) volunteers for September and October. However, data from the northern Washington beaches indicate a "wreck" in the Common Murre (*Uria aalge*) population. A "wreck" is defined by COASST when surveyors find more than 10 dead birds of the same species during a single citizen science survey. Sixty-seven dead birds were found at Hobuck Beach on one day in October, the majority being adult and juvenile Common Murres. Similar but smaller numbers have been reported from the adjacent Sooes Beach in October. This spike in mortality is most likely due to the intense multi-day wind storm that occurred on the outer Washington coast at the end of September. Data about bird mortality south of Sooes, along the Olympic National Park beaches, is lacking due to the federal government shut down in



Figure 4: Mottled Petrel (BirdWeb)

The Laysan Albatross (*Phoebastria immutabilis*) lives primarily on the Hawaiian Islands but ranges from Japan to the Bering Sea. They have become a common species in Hawaii, but are still protected. Their population is rebounding but they were once hunted to near extinction for their feathers and are still vulnerable to longline fisheries, the ingestion of floating plastics, and predation by feral cats. Their presence on the Washington coast is rare.

Sea Star Wasting Disease Outbreak Along West Coast

During summer 2013 there was evidence of an onset of sea star Wasting disease, with an extremely large spatial range and overall dramatic effect. MARINE monitoring groups have documented Wasting disease in *Pisaster ochraceus* from Alaska through California. Sea star wasting disease is a general description of a set of symptoms that are found in sea stars. Typically, lesions appear in the ectoderm followed by decay of tissue surrounding the lesions, which leads to eventual fragmentation of the body and death. A deflated appearance can precede other morphological signs of the disease. All of these symptoms are also associated with ordinary attributes of unhealthy stars and can arise when an individual is stranded too high in the intertidal and simply desiccates. The progression of wasting disease can be rapid, leading to death within a few days, and its effects can be devastating on sea star populations. The proximal cause of the disease, when pathological studies have been done, is typically a bacterium (vibrio), although a recent wasting event on the east coast of the United States has been attributed to a virus. The ultimate cause is not clear although such events are often associated with warmer than typical water temperatures as was the case for the major die off in southern California in 1983-1984 and again (on a lesser scale) in 1997-98. Following the 1983-1984 event, the ochre star, *Pisaster ochraceus*, was virtually absent along southern California shorelines for years. Two common attributes for many of the monitored sites were: 1) sites were characterized by warm water temperatures during the period prior to Wasting and 2) site effects were dramatic. Sea stars, *Pisaster ochraceus* in particular, have effects on the community that are vastly disproportionate to their abundance. *Pisaster ochraceus* was the basis of the keystone species concept because of its potential to dramatically alter the rocky intertidal community in which it occurs. For more detailed information:

<http://www.eeb.ucsc.edu/pacificrockyintertidal/data-products/sea-star-wasting/index.html#track-disease>

REGIONAL / NATIONAL ONMS NEWS

Government Shutdown Impacts ONMS Operations and Programs

The sixteen day government shutdown in October impacted the National Marine Sanctuary System and its communities, partners and staff on a deep level. As a result of closed visitors centers, cancelled meetings, and inability of staff to participate in outreach events around the country, the National Marine Sanctuary System lost the opportunity to interact with, engage and support more than 43,000 people about its resource protection and management activities. Constituents included a broad range of individuals from the general public, local businesses, researchers, educators and international marine protected area managers from 90 countries. More than 1,800 teachers and students located in sanctuary communities across the country were not served through formal educational programming, including in-class visits, class field trips to sanctuary sites and professional development. The government shutdown resulted in the cancellation of three sanctuary advisory council meetings and at least two working group meetings; the reduction of a multi-day council meeting to a single day; and the postponement of three public information sessions. The furlough interrupted NOAA's work analyzing and responding to nearly 18,000 public comments on the agency's proposed process to re-establish the sanctuary nomination process, as well as several other public input processes. Science and research efforts lost to the shutdown included the cancellation or delay of 17 scheduled cruises aboard NOAA and partner research vessels and aircraft, resulting in at least \$240,000 for ship time and related contracts. October is a prime month for field operations and some missions cannot be rescheduled until next year due to weather and limited sea days, resulting in critical data gaps for resource protection and management. The two-week data gap resulted in a loss of trained volunteer hours in various citizen science programs, which are critical for maintaining consistent multi-year datasets. More than 300 sanctuary system volunteers were unable to participate in scheduled events during the shutdown and an overall approximately \$37,000 worth of volunteer hours were lost due to the furlough.

Presidential Proclamation November National Native American Heritage Month in

On Oct. 31 The White House Released a Presidential Proclamation for November to be National Native American Heritage month. During this month, the US honors the vibrant cultures and strengthens the government-to-government relationship between the United States and each tribal nation. President Obama highlighted some of his Administration's efforts to work with Native Americans, such as hosting the annual White House Tribal Nations Conference. The Administration's efforts included resolving longstanding legal disputes, placing land into trust on behalf of tribes, supporting Tribal Colleges and Universities, making tribal health care more accessible, and streamlining leasing regulations to put more power in tribal hands. Earlier this year, an amendment to the Stafford Act gave tribes the option to directly request Federal emergency assistance when natural disasters strike their homelands. In March 2013, President Obama signed the Violence Against Women Reauthorization Act, which recognizes tribal courts' power to convict and sentence certain perpetrators of domestic violence, regardless of whether they are Indian or non-Indian. In June, Obama moved to strengthen nation-to-nation relationships by establishing the White House Tribal Council on Native American Affairs. The Council is responsible for promoting and sustaining prosperous and resilient Native American communities. The proclamation calls upon all Americans to commemorate the month with appropriate programs and activities and to celebrate Native American Heritage Day on Nov. 29.

Executive Order Issued to Prepare the US for Impacts of Climate Change

On Nov. 6 the Federal Register Notice released Executive Order 13653 of November 1, 2013: “*Preparing the United States for the Impacts of Climate Change*.” The order was created to prepare the Nation for the impacts of climate change by undertaking actions to enhance climate preparedness and resilience. It contains nine sections, including Policy, Modernizing Federal Programs to Support Climate Resilient Investment, Managing Lands and Waters for Climate Preparedness and Resilience, Providing Information, Data and Tools for Climate Change Preparedness and Resilience, Federal Agency Planning for Climate Change Related Risk and more.

Congress Support for Sanctuary Nomination Process Rule

On Oct. 31 twenty-six members of Congress signed a letter in support of NOAA’s proposed rule to re-establish a means to consider new sanctuary designations through the nominations process. The letter was signed on a bicameral basis with both Representatives and Senators.

NEWS COVERAGE

Killer Whales in Winter- Recent Findings About Range, Diet and Behaviors

NOAA Researchers are investigating where southern resident orcas are traveling during the winter and what they are eating. Brad Hanson of NOAA Fisheries will present on Nov. 12th 7-9 pm at C&P Coffee Company, in partnership with The Whale Trail.

<http://www.westseattleherald.com/2013/11/05/features/killer-whales-winter-recent-findings-about-ra>

Second Sighting of Endangered North Pacific Right Whale in BC Waters in 62 Years

An endangered North Pacific right whale was sighted off the entrance to Juan de Fuca Strait near Victoria in late October. The population of this species is thought to number only 30 whales in the eastern North Pacific.

<http://www.vancouversun.com/technology/Second+sighting+endangered+North+Pacific+right+whale+waters+years/9108970/story.html>

String of Whale Encounters Around Vancouver Island Just Good Luck, Experts Say

This year has been an atypical year for cetacean sightings and encounters around Vancouver Island, but scientists do not link the occurrences to a particular factor.

<http://www.timescolonist.com/sports/string-of-whale-encounters-around-vancouver-island-just-good-luck-experts-say-1.686388>

Scientists Stumped by West Coast Sardine, Starfish Die-Off

Scientists found that “sea star wasting disease” has killed ~95% of orange and purple sea stars commonly found in tide pools. The disease is widespread and seems to be a natural occurrence. Sardine populations have also entered a significant down cycle, with fisheries managers regulating significantly smaller harvests for 2014.

<http://losangeles.cbslocal.com/2013/11/04/scientists-stumped-by-west-coast-sardines-starfish-die-off>

Fallen Stars: Wasting Disease Spreading Along West Coast, Including Humboldt County Tide Pools

Local sea stars appeared to be dying of a disease spreading along the West Coast from Vancouver, BC to Santa Barbara, CA. The disease causes sea stars to lose their arms and was first observed in June.

http://www.times-standard.com/localnews/ci_24455824/fallen-stars-wasting-disease-spreading-along-west-coast

Human Impacts on Top Ocean Predators Along US West Coast Mapped

Scientists found that many areas of high human impact on marine predators such as whales, seals, seabirds and turtles are within boundaries of the five national marine sanctuaries of the West Coast. The study Tagging of Pacific Predators (TOPP) began in 2000 and tracks 23 species, with an aim to provide information to support management and policy.

<http://esciencenews.com/articles/2013/10/28/study.maps.human.impacts.top.ocean.predators.along.us.west.coast>

Study Maps Human Impacts on Top Ocean Predators Along US West Coast

A new study reveals that areas along the West Coast where human impacts are highest on marine predators are within national marine sanctuaries boundaries. Tagged marine predators travel thousands of miles in search of ideal breeding or hunting, including areas within the California Current System which produces rich upwelling events.

<http://esciencenews.com/articles/2013/10/28/study.maps.human.impacts.top.ocean.predators.along.us.west.coast>

Bottom-Feeding Behavior of Humpback Whales Confirmed

Humpback whales have not been known to be bottom feeders, but predominantly feed that way in the southern Gulf of Maine. A collaborative group of researchers used DTAGs to track whale movements and found that Humpbacks fed with bottom side-roll feeding, targeting sand lance.

<http://www.sciencedaily.com/releases/2013/10/131030125324.htm>

Are Bulkheads Bad for Puget Sound?

Bulkheads and beach berms disrupt shore currents and block natural beach replenishment, diminishing sand, gravel and sea wrack in intertidal zones. These zones serve as nurseries and feeding grounds for important fish species, so the increase in bulkhead development along Puget Sound coast has been found in recent studies to compromise the food web and ecosystem.

<http://crosscut.com/2013/11/04/puget-sound/117135/bulkheads-bad-for-puget-sound-beaches>

Watch: More Than 1,000 Dolphins Swim with Ferry

A video captured a rare sighting of a dolphin superpod with approximately 1,000 individuals swimming in the Strait of Georgia. It was captured by a passenger as the dolphins swam alongside a ferry in BC waters between the Gulf Islands and Vancouver.

Anti-whaling Activist Testifies in US Court

A fugitive anti-whaling activist known for confronting Japanese whaling vessels off Antarctica is testifying about his actions in a US court. Paul Watson, founder of Sea Shepherd Conservation Society took to the witness stand in Seattle

http://seattletimes.com/html/localnews/2022198639_apxwhalingprotestlawsuit.html

WEB SITE (<http://olympiccoast.noaa.gov/>)

Follow the OCNMS on Facebook!

<https://www.facebook.com/usolympiccoastgov>

Please take a few moments to peruse the site. Your feedback is greatly appreciated.

*Comments and suggestions can be sent to
Jacqueline.Laverdure@noaa.gov.*

FUN, OCEAN-RELATED WEB SITES

National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

National Ocean Service

<http://www.nos.noaa.gov/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

Washington's Ocean Resources

<http://www.ecy.wa.gov/programs/sea/ocean/index.html>

NOAA Marine Debris Program

<http://marinedebris.noaa.gov/>

CoastWatch – West Coast Regional Node

<http://coastwatch.pfel.noaa.gov/>

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

Northwest Association of Networked Ocean Observing Systems

<http://www.nanoos.org/>

Encyclopedia of National Marine Sanctuaries

<http://www8.nos.noaa.gov/onms/park/>

NOAA's Pacific Marine Environmental Laboratory

<http://www.pmel.noaa.gov/>

Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Olympic Coast National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.olympiccoast.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
http://olympiccoast.noaa.gov/involved/sac/sac_welcome.html

The Office of National Marine Sanctuaries

The Olympic Coast National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

Get involved!

To learn how to get involved in the Sanctuary visit:
<http://olympiccoast.noaa.gov/involved/welcome.html>

OCNMS Staff

Carol Bernthal– Superintendent

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Kevin Grant– Deputy Superintendent for Operations & Admin

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Norma Klein– Office Administrator

Karlyn Langjahr– AC Coordinator & Discovery Center Mgr

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Robert Rountree– Visitor Services Specialist

Robert Steelquist– Education and Outreach Coordinator

Nancy Wright– Geographer

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